Lake Cascade Lake Vegetation Index Results (10-17-2016)

The Lake Vegetation Index (LVI) is a multi-metric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations, and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units (Figure 1). Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

Aquatic life use category	LVI Range	Description
Exceptional	78–100	Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance.
Healthy	43–77	About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%.
Impaired	0–42	About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less that 10% of the taxa are sensitive.

The Lake Vegetation Index score for Lake Cascade was 91, placing the lake's vegetative community in the exceptional category.

Twenty nine plant species were found during the survey. The native species pond cypress (*Taxodium ascendens*) was the most dominant species of the lake. Other native shoreline vegetation included; red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*) and swamp tupelo (N*yssa sylvatica var. biflora*).

Unfortunately, wild taro (*Colocasia esculenta*) listed as a Category I Invasive Exotic by the Florida Exotic Pest Control Council http://www.fleppc.org/ was found at Lake Cascade.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake Carr LVI survey (10-17-16).

Species Name	Common Name
Acer rubrum	red maple
Andropogon virginicus	broomsedge bluestem
Bidens laevis	smooth beggartick
Bidens mitis	smallfruit beggartick
Cephalanthus occidentalis	buttonbush
Colocasia esculenta (I)	wild taro
Cyrilla racemiflora	swamp titi
Eupatorium sp.	eupatorium
Hypericum hypericoides	St. Andrews cross
Ilex myrtifolia	myrtle dahoon
Leersia hexandra	southern cutgrass
Liquidamber styraciflua	American sweetgum
Ludwigia leptocarpa	anglestem primrose willow
Ludwigia sp.	primrose willow
Ludwigia sphaerocarpa	globe-fruited primrose willow
Lycopus rubellus	taperleaf water horehound
Lycopus virginicus	Virginia water horehound
Myrica cerifera	wax myrtle
Nymphaea odorata	fragrant waterlily
Nyssa aquatica	water tupelo
Nyssa sylvatica var. biflora	swamp tupelo
Panicum hemitomon	maidencane
Parthenocissus quinquefolia	Virginia creeper
Quercus nigra	water oak
Quercus virginiana	southern live oak
Sacciolepis striata	American cupscale-grass
Taxodium ascendens	pond cypress
Triadenum walteri	greater marsh st. johnswort
Vaccinium corymbosum	highbush blueberry
Vitis rotundifolia	muscadine

I - Category I Invasive Exotics

For additional information about the LVI please go to the Florida Department of Environmental Protection webpage; http://www.dep.state.fl.us/water/sas/training/docs/lvi_primer.pdf. For additional information about exotic Category I invasive exotic plants, please go to the Florida Exotic Pest Plant Council http://www.fleppc.org/list/list.htm.

FIGURE 1. Lake Cascade showing unit divisions. Circled unit numbers denote surveyed units.